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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,229	08/03/2006	Weiping Zeng	1691-0222PUS1	5417
2292 7590 04/11/2008 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER YOON, TAE H				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
04/11/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/588,229

Applicant(s)

ZENG ET AL.

Examiner

Tae H. Yoon

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 6 and 7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6 and 7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 11/2/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chappelow et al (US 6,610,759).

Chappelow et al teach the instant 2-(methacryloyloxy)ethyl maleate at col. 6, lines 14-58 and in examples. The instant component D (CQ, camphorquinone, col. 13, line 32) and component C (EDMAB, ethyl p-dimethylaminobenzoate, col. 14, line 42) are taught at bottom of each tables for examples. Tables IV, V and VII also teach employing 2-hydroxyethylmethacrylate.

Chappelow et al further teach employing comonomers such as di(meth)acrylates at col. 17, line 26 to col. 18, line 37. Use of a filler in an amount of 1-90 wt.% is also taught at col. 20, lines 19-22.

It would have been obvious to one skilled in the art at the time of invention to utilize said di(meth)acrylates and filler in examples containing 2-(methacryloyloxy)ethyl maleate and 2-hydroxyethylmethacrylate since Chappelow et al further teach employing comonomers and fillers and since use of multifunctional comonomers would improve mechanical properties due to its crosslinking ability absent showing otherwise.

Claims 1, 2, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 5-170618 in view of Chappelow et al (US 6,610,759) or Nakatsuka et al (US 6,790,877).

JP teaches curable compositions comprising a carboxyl group containing monomer, other radical polymerizable monomers and a initiator in English abstract and

JP teaches the instant phthalic acid containing monomer A in [0041]. Use of 70 parts by weight of a filler is taught in table B of page 11.

The instant invention further recites 2-hydroxyethylmethacrylate and difunctional monomer over JP. However, use of said 2-hydroxyethylmethacrylate and difunctional monomer with an acid group containing comonomer in dental composition is well known as taught by Chappelow et al and Nakatsuka et al (table 1 on col. 28 wherein the instant HEMA, HD. CQ and DMAB are taught. See the bridging table on cols. 24 and 25 for said HEMA, HD. CQ and DMAB).

It would have been obvious to one skilled in the art at the time of invention to utilize a photoinitiator system and said 2-hydroxyethylmethacrylate and difunctional monomer of Chappelow et al or Nakatsuka et al in JP since JP teaches other radical polymerizable monomers and since use of said 2-hydroxyethylmethacrylate and difunctional monomer in dental compositions containing an acidic monomer is well known as taught by Chappelow et al and Nakatsuka et al and since use of multifunctional comonomers would improve mechanical properties due to its crosslinking ability absent showing otherwise.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (571) 272-1128. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tae H Yoon
Primary Examiner
Art Unit 1796

THY/April 6, 2008

/Tae H Yoon/